

CLAIMS

1. A white biaxially oriented polyester film for use as a base film for receiving an ink jet printer image, which satisfies the following requirements (1) to (4):

- (1) the content of titanium oxide particles having an average particle diameter of 0.1 to 0.5 μm in the polyester film is 5 to 20 wt%;
- (2) the polyester film has an average glossiness of 65 to 95 %;
- (3) the polyester film has an X-ray diffraction intensity ratio (F-1/F-2) represented by the following formula (1):
- $$0.05 \leq F-1/F-2 \leq 0.15 \quad (1)$$
- wherein (F-1) is an X-ray diffraction intensity on a plane (110) parallel to the surface of the film and (F-2) is an X-ray diffraction intensity on a plane (100) parallel to the surface of the film; and
- (4) the polyester film has a static friction coefficient of 0.3 to 0.6.

2. A white biaxially oriented polyester laminate film for use as a base film for receiving an ink jet printer image wherein a coating film layer substantially made of the following components (A) to (C) is formed on at least one side of the white biaxially oriented polyester film of claim 1;

- (A) 50 to 80 wt% of a copolyester having a secondary transition point of 20 to 90°C;
- (B) 10 to 30 wt% of a water-soluble polymer compound; and
- (C) 3 to 25 wt% of fine particles having an average particle diameter of 20 to 80 nm.

3. The film of claim 1 or 2, wherein the polyester film has a thickness of 50 to 250 μm .

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4. The film of claim 1 or 2, wherein the polyester film has a thermal shrinkage factor of 2 % or less when it is kept at 150°C for 30 minutes.

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5. The film of claim 1 or 2, wherein the polyester film has such whiteness that lightness (L^*) and chroma (C^*) defined in CIE1976 satisfy the following expressions (1) to (3):

$$L^* \geq 90 \quad (1)$$

$$C^* \geq 3 \quad (2)$$

$$2L^* + C^* \geq 190 \quad (3)$$

provided that $C^* = \{(a^*)^2 + (b^*)^2\}^{1/2}$.

6. The film of claim 1 or 2, wherein the polyester film has an optical density of 0.7 to 1.6.

7. The film of claim 1 or 2, wherein the polyester film has a center line average surface roughness (R_a) of 30 to 100 nm.

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8. The film of claim 1 or 2, wherein the polyester film has a molecular orientation rate (MOR) of 1.1 to 4.0.

9. The film of claim 1 or 2, wherein the polyester film contains inert particles having an average particle diameter of 0.01 to 5.0 μm other than titanium oxide particles in an amount of 0.01 to 5.0 wt%.

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10. The film of claim 1 or 2, wherein the polyester film is formed from polyethylene terephthalate.

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11. The film of claim 1 or 2, wherein the coating film layer has a thickness of 0.02 to 1 μm .

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12. The laminate film of claim 2, wherein the coating film layer has a surface energy of 50 to 70 mN/m.

13. The laminate film of claim 2, wherein the coating film
5 layer is substantially made of (A) 55 to 75 wt% of a copolyester having a secondary transition point of 20 to 90°C, (B) 12 to 25 wt% of a water-soluble polymer and (C) 5 to 20 wt% of fine particles having an average particle diameter of 20 to 80 nm.

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14. The laminate film of claim 2, wherein the copolyester (A) of the coating film layer contains a dicarboxylic acid(s) having a sulfonate group in an amount of 1 to 16 mol% based
15 on the total of all the dicarboxylic acid components forming the copolyester.

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15. The laminate film of claim 2, wherein the copolyester (A) of the coating film layer has a secondary transition point of 25 to 80°C.

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16. The laminate film of claim 2, wherein the water-soluble polymer compound (B) of the coating film layer is at least one selected from the group consisting of a polyvinyl alcohol, polyvinyl pyrrolidone and polyethylene glycol.

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17. The laminate film of claim 2, wherein the fine particles (C) of the coating film layer has an average particle diameter of 25 to 50 nm.

18. The laminate film of claim 2, wherein the coating film layer is formed by blending a polyfunctional epoxy compound into a composition substantially consisting of the components (A), (B) and (C).

19. A polyester laminate film for use as a base film for receiving an ink jet printer image which consists of a polyester film and a coating film layer formed on at least one side of the polyester film, wherein

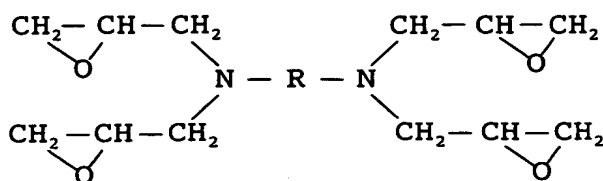
5 the coating film layer is substantially made of (A) 50 to 80 wt% of a copolyester containing a dicarboxylic acid component having a sulfonate group in an amount of 1 to 16 mol% based on the total of all the dicarboxylic acid components forming the copolyester and having a secondary
10 transition point of 20 to 90°C, (B) 10 to 30 wt% of a water-soluble polymer compound and (C) 3 to 25 wt% of fine particles having an average particle diameter of 20 to 80 nm and has a surface energy of 54 to 70 mN/m.

15 20. A polyester laminate film for use as a base film for receiving an ink jet printer image which consists of a polyester film and a coating film layer formed on at least one side of the polyester film, wherein

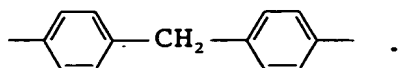
the coating film layer is substantially made of (A) 30
20 to 80 wt% of an aqueous binder, (B) 10 to 40 wt% of a water-soluble polymer, (C) 3 to 25 wt% of fine particles having an average particle diameter of 20 to 80 nm, and (D) 5 to 20 wt% of a polyfunctional epoxy compound crosslinking agent as the main ingredients and has a surface energy of
25 50 to 70 mN/m.

21. The laminate film of claim 20, wherein the polyfunctional epoxy compound crosslinking agent is represented by the following formula:

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wherein R is $-\text{CH}_2-\text{C}_6\text{H}_4-\text{CH}_2-$, $-\text{CH}_2-\text{C}_4\text{H}_8-\text{CH}_2-$ or



- 5 22. A white polyester laminate film for use as a base film
for receiving an ink jet printer image which consists of a
polyester film and a coating film layer formed from (A) a
copolyester, (B) polyalkylene oxide and (C) fine particles
as the main ingredients on at least one side of the polyester
10 film, wherein

the polyester film contains 5 to 20 wt% of titanium oxide having an average particle diameter of 0.1 to 0.2 μm and 0.01 to 5.0 wt% of inert fine particles having an average particle diameter of 0.01 to 5.0 μm other than titanium oxide and has an average glossiness of 80.5 to 95 % and a static friction coefficient of 0.30 to 0.50.

23. A white polyester laminate film for use as a base film for receiving an ink jet printer image which consists of a polyester film and a coating film layer formed from (A) a copolyester, (B) polyalkylene oxide and (C) fine particles as the main ingredients on at least one side of the polyester film, wherein

the polyester film contains 5 to 20 wt% of titanium
oxide having an average particle diameter of 0.1 to 0.2 μm
and 0.01 to 5.0 wt% of inert fine particles having an average
particle diameter of 0.01 to 5.0 μm other than titanium oxide
and has an average glossiness of 65 to 80 % and an X-ray
diffraction intensity ratio (F-1/F-2) which satisfies the
following expression (1):

$$0.05 \leq (F-1/F-2) \leq 0.15 \quad (1)$$

wherein (F-1) is an X-ray diffraction intensity on a plane (110) parallel to the surface of the film and (F-2) is an X-ray diffraction intensity on a plane (100) parallel to the

surface of the film.

24. A base film for receiving an ink jet printer image having an ink image receiving layer on the surface of the
5 coating film layer of the laminate film of claim 2.

25. Use of the laminate film of claim 1 as a base film for receiving an ink jet printer image.

- 10 26. Use of the laminate film of claim 2 as a base film for receiving an ink jet printer image.

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